

RUSH

Access DB# 170219

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Michael Brown Examiner #: 65949 Date: 11-1-05  
Art Unit: 3764 Phone Number: 24972 Serial Number: 10/685,776  
Mail Box and Bldg/Room Location: RND Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

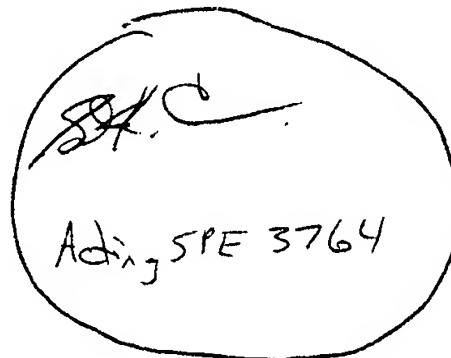
\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method For Forming Through A Guard An Implantation  
Space In The Human Spine  
Inventors (please provide full names): Dr. Gary/Michelson  
Kendall

Earliest Priority Filing Date: June 13, 1988

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



## STAFF USE ONLY

Searcher: Jeanne Hoviger  
Searcher Phone #: 23529  
Searcher Location: \_\_\_\_\_  
Date Searcher Picked Up: \_\_\_\_\_  
Date Completed: \_\_\_\_\_  
Searcher Prep & Review Time: \_\_\_\_\_  
Clerical Prep Time: \_\_\_\_\_  
Online Time: \_\_\_\_\_

### Type of Search

NA Sequence (#) \_\_\_\_\_  
AA Sequence (#) \_\_\_\_\_  
Structure (#) \_\_\_\_\_  
Bibliographic \_\_\_\_\_  
Litigation \_\_\_\_\_  
Fulltext \_\_\_\_\_  
Patent Family \_\_\_\_\_  
Other \_\_\_\_\_

### Vendors and cost where applicable

STN \_\_\_\_\_  
Dialog \_\_\_\_\_  
Questel/Orbit \_\_\_\_\_  
Dr.Link \_\_\_\_\_  
Lexis/Nexis \_\_\_\_\_  
Sequence Systems \_\_\_\_\_  
WWW/Internet \_\_\_\_\_  
Other (specify) \_\_\_\_\_



# STIC Search Report

EIC 3700

STIC Database Tracking Number: 170219

**TO: Michael Brown**  
**Location: RND 5d65**  
**Art Unit: 3764**

**Pinhole Cameras 10/685776**

**From: Jeanne Horrigan**  
**Location: RND 8A34**  
**Phone: 571-272-3529**

**jeanne.horrigan@uspto.gov**

## Search Notes

Attached are the search results for the method of using a single guide for drilling and implant in spinal surgery of the disc/vertebrae.

I tagged the items I thought were most relevant, but suggest that you review ALL of the results.

Also attached is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

I hope the attached information is useful. Please feel free to contact me if you have any questions or need additional articles on this subject.



# STIC Search Results Feedback Form

**EIC 3700**

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

**John Sims, EIC 3700 Team Leader**  
RND 8B35, Phone 2-3507

## Voluntary Results Feedback Form

➤ I am an examiner in Workgroup:  Example: 3730

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

**Comments:**

Drop off or send completed forms to STIC/EIC3700 RND 8B31



File 155:MEDLINE(R) 1951-2005/Nov 14  
 (c) format only 2005 Dialog  
 File 5:Biosis Previews(R) 1969-2005/Nov W1  
 (c) 2005 BIOSIS  
 File 73:EMBASE 1974-2005/Nov 15  
 (c) 2005 Elsevier Science B.V.  
 File 34:SciSearch(R) Cited Ref Sci 1990-2005/Nov W1  
 (c) 2005 Inst for Sci Info  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
 (c) 1998 Inst for Sci Info

Set	Items	Description
S1	758353	TUBE OR TUBULAR OR TUBELIKE OR SLEEVE OR CYLINDER OR CYLINDRICAL OR HOLLOW(1W) (SHAFT OR MEMBER OR DEVICE OR INSTRUMENT - OR PASSAGE??? OR GUARD) OR GUIDE
S2	445212	DISC? ? OR DISK? ? OR VERTEBRA? ?
S3	237483	IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIXATION() DEVICE? ?)
S4	1497313	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES OR HOLE OR HOLES OR CAVITY OR CAVITIES
S5	3584384	DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S6	751194	SPINE OR SPINAL
S7	314	S1 AND S2 AND S3
S8	187	S6 AND S7
S9	6281	S5(1W) S4
S10	3	S8 AND S9
<b>S11</b>	<b>2</b>	<b>RD (unique items) [too recent]</b>
S12	0	(S7 AND S9) NOT S10
S13	120	RD S8 (unique items)
S14	5	S13/2005
S15	14	S13/2004
S16	35	S13/2002:2003
S17	34	S13/2000:2001
S18	17	S13/1997:1999
S19	4	S13/1994:1996
S20	6	S13/1991:1993
S21	3	S13/1989:1990
<b>S22</b>	<b>2</b>	<b>S13 NOT S14:S21</b>
S23	3	S7 AND S9
S24	0	S23 NOT S10
S25	127	S7 NOT S8
S26	97	RD (unique items)
S27	49	S26/2000:2005
S28	22	S26/1995:1999
S29	16	S26/1989:1994
<b>S30</b>	<b>10</b>	<b>S26 NOT S27:S29</b>
S31	2267	S1 AND S2 AND S6
S32	254	S1/TI AND S31
S33	220	S32 NOT S7
S34	149	RD (unique items)
S35	67	S34/2000:2005
S36	18	S34/1995:1999
S37	26	S34/1989:1994
S38	38	S34 NOT S35:S37
<b>S39</b>	<b>38</b>	<b>Sort S38/ALL/PY,A</b>
S40	192	S1(S) S2(S) S3
S41	0	S40 NOT (S7 OR S32)

22/7/1 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2005 Dialog. All rts. reserv.

08420477 PMID: 3194791

**Posterior plating of the cervical spine . A biomechanical comparison of different posterior fusion techniques.**

Gill K; Paschal S; Corin J; Ashman R; Bucholz R W

Division of Orthopaedic Surgery, University of Texas Southwestern Medical Center, Dallas.

**Spine** (UNITED STATES) Jul 1988, 13 (7) p813-6, ISSN 0362-2436

Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Posterior arthrodesis is a preferred treatment for posttraumatic instability of the cervical **spine** . While most surgical constructs yield predictably high rates of fusion in satisfactory alignment, certain injury patterns involving fractures of the lamina or spinous processes may preclude rigid immobilization by simple wiring techniques. Plate **fixation** of the posterolateral masses has been advocated for such injuries. The purpose of this biomechanical study was to test the relative stiffness provided by different posterior fusion constructs, including lateral mass plating. All testing was performed on fresh, unembalmed cadaveric **spines** divided into two **vertebral** segment units. Muscular tissue was stripped from the specimens, but all **discal** and ligamentous structures were preserved. Four different posterior **fixation** constructs were tested. These included 1) Rogers interspinous wiring, 2) Halifax laminar clamps, 3) bilateral 1/3 **tubular** plates on the lateral masses, using unicortical screws, and 4) bilateral 1/3 **tubular** plates on the lateral masses, using bicortical screws. Stiffness measurements were taken in both flexion and extension on all specimens. Yield strength and fatigue strength of the **spines** were not measured. It was found that 1/3 **tubular** plates secured with bicortical screws to the lateral masses provided the highest mean stiffness. Less stiffness was found in **spines** stabilized by Halifax clamps, interspinous wiring, and plates secured with unicortical screws. There was, however, no statistically significant difference in stiffness provided by any of these four **implants** . It was concluded that there is no advantage in plate **fixation** over standard fusion constructs in augmenting the stiffness of posterior **fixation** of the cervical **spine** .

Record Date Created: 19890112

Record Date Completed: 19890112

30/7/3 (Item 3 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2005 Dialog. All rts. reserv.

06101469 PMID: 7260228

**Suggestions for a total elasto-dynamic intervertebral disc prosthesis.**

Edeland H G

Biomaterials, medical devices, and artificial organs (UNITED STATES)

1981, 9 (1) p65-72, ISSN 0090-5488 Journal Code: 0356630

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The essential considerations to be taken for the design of a composite elasto-dynamic intervertebral disc prosthesis (IDP) are discussed, and a disc implant, supposedly satisfying the demands for surgical and biomechanical applicability and biocompatibility, are outlined. The suggested IDP implant is composed of an elastic kernel, covered in a two-components telescoping shell, situated in a polymer slit-tube fundament, after preparation fixed to the respective vertebral bodies of the respective motion segment with bone cement. The approach to a lumbar motion segment is suggested to be by way of an abdominal and retroperitoneal incision and exploration.

Record Date Created: 19811025

Record Date Completed: 19811025

39/6/12 (Item 12 from file: 73)  
00531736 EMBASE No: 1976087294  
Vertebral osteotomy in tubular kyphosis  
1975

39/6/16 (Item 16 from file: 155)  
05951170 PMID: 7456772  
[Lumbar spondylolisthesis with radicular compression symptoms; guide lines for diagnostic clarification and for conservative and surgical treatment]

Lumbale Spondylolisthesis mit Wurzelkompressionsbeschwerden; Richtlinien für Abklärung, für die konservative und chirurgische Behandlung.  
Sep-Oct 1980

39/6/28 (Item 28 from file: 155)  
07385020 PMID: 3903071  
Anterior cervical interbody fusion with threaded cylindrical bone.  
Nov 1985

39/7/6 (Item 6 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2005 Dialog. All rts. reserv.  
03810874 PMID: 5016456  
Lumbar diskography using a posterolateral approach with a guide .  
Roberts A; Loupe J; Goldsmith J; Comeaux L; Wickstrom J  
Southern medical journal (UNITED STATES) Mar 1972, 65 (3) p358-60,  
ISSN 0038-4348 Journal Code: 0404522  
Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed  
Record Date Created: 19720613  
Record Date Completed: 19720613

39/7/15 (Item 15 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2005 Dialog. All rts. reserv.  
05182889 PMID: 615963  
Self-contained tubular drill guard for anterior cervical fusion.  
Solomon A; Herz D A  
Neurosurgery (UNITED STATES) Sep-Oct 1977, 1 (2) p136-8, ISSN

0148-396X Journal Code: 7802914

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A self-contained **tubular drill guard** was adapted for use in performing anterior cervical **discectomies** and interbody fusions. The use of this instrument eliminates steps, provides absolute safety against **drilling** too deeply, allows for adjustment in individual cases, provides for easy inspection of the trephine **hole**, permits electing the cephalocaudal angle of the **drill**, and gives a measurement of the ultimate depth of the trephine **hole**. In 171 consecutive operations only one neurological complication occurred, and total morbidity related to cervical surgery was 6% (7% morbidity was associated with surgery at the donor site). The data suggest that the technical modification herein advocated reduces the surgical complication rate.

Record Date Created: 19781018

Record Date Completed: 19781018

39/7/18 (Item 18 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) **format** only 2005 Dialog. All rts. reserv.

05681027 PMID: 7351574

**A modified drill guide for the anterior cervical fusion (Cloward) procedure. Technical note.**

Berry H; Horsey W J

Journal of neurosurgery (UNITED STATES) Feb 1980, 52 (2) p284-5,

ISSN 0022-3085 Journal Code: 0253357

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A modified **drill guide** for use in the anterior cervical fusion procedure is described. This device permits an inspection of the interbody **hole** during the **drilling** process, and incorporates the additional mechanical improvements of replacement **fixation** points and locking rings of different diameter. These modifications have been found to simplify and improve control over the **drilling** component of this surgical procedure.

Record Date Created: 19800317

Record Date Completed: 19800317

39/7/20 (Item 20 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) **format** only 2005 Dialog. All rts. reserv.

05982262 PMID: 7471583

**Cervical orthoses: a guide to their selection and use.**

Johnson R M; Owen J R; Hart D L; Callahan R A

Clinical orthopaedics and related research (UNITED STATES) Jan-Feb 1981

, (154) p34-45, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A large variety of cervical orthoses is available, but these may be divided into four basic groups. Although the orthoses in each group provide similar controls, each appliance has certain discrete advantages and limitations. The effectiveness of seven different cervical appliances in restricting motion in flexion-extension, lateral bending and rotation is presented. This information may be used to rationally select an orthosis to control specific clinical problems. A guide is formulated for selecting the orthoses for the control of various cervical injuries and postoperative problems.

Record Date Created: 19810521

Record Date Completed: 19810521

39/7/32 (Item 32 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2005 Dialog. All rts. reserv.

07467279 PMID: 3945475

**Early rod-sleeve stabilization of the injured thoracic and lumbar spine.**

Edwards C C; Levine A M

Orthopedic clinics of North America (UNITED STATES) Jan 1986, 17 (1)  
p121-45, ISSN 0030-5898 Journal Code: 0254463

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The rod- sleeve method provides adjustable corrective forces in all directions so as to accomplish anatomic alignment and three-dimensional rigid fixation for acute spinal injuries. The authors studied a prospective series of 135 consecutive cases treated with this new technique. Results showed improved indirect canal decompression and neurologic recovery, few complications, and greater maintenance of correction than previously reported.

Record Date Created: 19860319

Record Date Completed: 19860319

39/7/34 (Item 34 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0005332435 BIOSIS NO.: 198732061326

**NEEDLE GUIDE APPARATUS FOR DISCOLYSIS PROCEDURES US PATENT-4638799.**

**JANUARY 27 1987**

AUTHOR: MOORE R R (Reprint)

AUTHOR ADDRESS: 4010 EAST AVE, HAYWARD, CALIF 94545, USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1074 (4): p1916 1987

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: ENGLISH



File 94:JICST-EPlus 1985-2005/Sep W2  
 (c)2005 Japan Science and Tech Corp(JST)  
 File 95:TEME-Technology & Management 1989-2005/Oct W2  
 (c) 2005 FIZ TECHNIK  
 File 99:Wilson Appl. Sci & Tech Abs 1983-2005/Oct  
 (c) 2005 The HW Wilson Co.  
 File 144:Pascal 1973-2005/Nov W1  
 (c) 2005 INIST/CNRS  
 File 35:Dissertation Abs Online 1861-2005/Oct  
 (c) 2005 ProQuest Info&Learning  
 File 65:Inside Conferences 1993-2005/Nov W2  
 (c) 2005 BLDSC all rts. reserv.  
 File 431:MediConf: Medical Con. & Events 1998-2004/Oct B2  
 (c) 2004 Dr. R. Steck  
 File 8:Ei Compendex(R) 1970-2005/Nov W1  
 (c) 2005 Elsevier Eng. Info. Inc.  
 File 6:NTIS 1964-2005/Nov W1  
 (c) 2005 NTIS, Intl Cpyrght All Rights Res

Set	Items	Description
S1	841320	TUBE OR TUBULAR OR TUBE LIKE OR SLEEVE OR CYLINDER OR CYLINDRICAL OR HOLLOW(1W) (SHAFT OR MEMBER OR DEVICE OR INSTRUMENT - OR PASSAGE??? OR GUARD) OR GUIDE
S2	280125	DISC? ? OR DISK? ? OR VERTEBRA? ?
S3	110576	IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIX- ATION() DEVICE? ?)
S4	1781288	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES OR HOLE OR HOLES OR CAVITY OR CAVITIES
S5	2350231	DRILL??? OR FORM OR FORMS OR FORMING OR FORMED
S6	206240	SPINE OR SPINAL
S7	71	S1 AND S2 AND S3
S8	64	RD (unique items)
S9	64	Sort S8/ALL/PY,A [not relevant]
S10	71	S1 AND S3 AND S6
S11	42	S10 NOT S7
S12	41	RD (unique items)
S13	41	Sort S12/ALL/PY,A [not relevant]

File 149:TGG Health&Wellness DB(SM) 1976-2005/Nov W1  
(c) 2005 The Gale Group  
File 16:Gale Group PROMT(R) 1990-2005/Nov 16  
(c) 2005 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 148:Gale Group Trade & Industry DB 1976-2005/Nov 16  
(c)2005 The Gale Group  
File 621:Gale Group New Prod.Annou.(R) 1985-2005/Nov 16  
(c) 2005 The Gale Group  
File 636:Gale Group Newsletter DB(TM) 1987-2005/Nov 16  
(c) 2005 The Gale Group  
File 635:Business Dateline(R) 1985-2005/Nov 15  
(c) 2005 ProQuest Info&Learning  
File 9:Business & Industry(R) Jul/1994-2005/Nov 15  
(c) 2005 The Gale Group  
File 441:ESPICOM Pharm&Med DEVICE NEWS 2005/Sep W4  
(c) 2005 ESPICOM Bus.Intell.  
File 98:General Sci Abs/Full-Text 1984-2004/Dec  
(c) 2005 The HW Wilson Co.

Set	Items	Description
S1	513664	TUBE OR TUBES OR TUBULAR OR TUBELIKE OR SLEEVE OR SLEEVES - OR CYLINDER? ? OR CYLINDRICAL
S2	1091	HOLLOW(1W) (SHAFT? ? OR MEMBER? ? OR DEVICE? ? OR INSTRUMEN- T? ? OR PASSAGE??? OR GUARD? ?)
S3	878610	GUIDE OR GUIDES OR CONDUIT? ? OR DUCT? ?
S4	765225	DISC? ? OR DISK? ? OR VERTEBRA? ?
S5	75458	IMPLANT? ? OR BONE()PLUG? ? OR SPINAL() (FASTENER? ? OR FIX- ATION()DEVICE? ?)
S6	25	SPINAL() (SCREW? ? OR NUT? ? OR STAPLE OR STAPLES)
S7	3090784	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES
S8	4985051	DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S9	97	S1:S3(S)S4(S)S5:S6
S10	45	RD (unique items) [too recent]
S11	45	Sort S10/ALL/PD,A
S12	81439	SPINE OR SPINAL
S13	14323	S1:S3(S) (S4 OR S6 OR S5(S)S12)
S14	2116	S1:S3(S)S12
S15	340	S1:S3(S)S4:S5(S)S12
S16	0	S1:S3(S)S6
S17	286	S15 NOT S9
S18	208	RD (unique items)
S19	208	Sort S18/ALL/PD,A

19/7/4 (Item 4 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

02045269 SUPPLIER NUMBER: 03257660 (THIS IS THE FULL TEXT)

**New surgical procedure for herniated spinal disks introduced at Graduate  
Hospital.**

PR Newswire, NYPR66

May 4, 1984

TEXT:

PHILADELPHIA, May 4 (PRNewswire) -- A surgical procedure which has dramatic implications for those who suffer the severe, sometimes crippling, pain from herniated spinal disks, has been developed and performed with apparently complete success by an orthopedic surgeon at the Graduate

Hospital, it was reported today.

The new procedure, which eliminates most post-operative illness and pain and shortens the hospital stay, was developed by Parviz Kambin of the Graduate Hospital's Department of Orthopedic Surgery. Kambin has performed the procedure on 50 patients.

Kambin reported that patients upon whom he performed "Percutaneous Lateral Discectomy" were able to leave the hospital within two or three days after the surgery and that they experienced complete relief from the sciatica (lower back) pain associated with disk problems.

He also noted the patients did not experience post-operative bleeding and scar formation which often accompanies conventional laminectomy (disk removal) and there was no instance of reherniation after the surgery.

After administration of only local anesthesia to the patient, an incision is made to the side of the **spinal** column, thereby avoiding the need to cut through approximately two inches of muscle as is done in laminectomy. A fine **tube**, or cannula, is inserted into the incision and a cutting instrument, threaded through the cannula, is used to make a window in the annulus, a ring-shaped structure attached to the **disk**.

Fragmented disk material then is withdrawn through the window with a specially designed forceps and an aspirator (suction apparatus). Trauma associated with the procedure is so slight that the patient is able to sit up and walk the day of or the day after the surgery. Minimal post-operative back pain was experienced by the patients who underwent the surgery and this was controlled by oral medication.

Recently, a new Disc Treatment Center opened at the Graduate Hospital. The multi-disciplinary approach of the center provides the services of orthopaedists, neurosurgeons, neurologists and neuroradiologists in the diagnosis and treatment of disc disorders.

Kambin, who received his medical degree at Teheran University, has been a member of the attending staff at Graduate since 1972. He is a diplomate of the American Board of Orthopedic Surgery and holds memberships in the American Academy of Orthopedic Surgery, the International College of Surgeons and the Philadelphia and Pennsylvania Orthopedic Associations.

/CONTACT -- Tony Ryzinski of the Graduate Hospital at 215-893-2332/  
COPYRIGHT 1984 PR Newswire

19/7/8 (Item 8 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
(c) 1999 The Gale Group. All rts. reserv.  
01420149

**Spinal disk procedure uses needlelike probe.**

MEDICAL WORLD NEWS September 22, 1986 p. 33

Percutaneous discectomy is 73% successful in treating herniated **disks**, according to G Onik of Allegheny General Hospital (Pittsburgh, Pennsylvania). A suction-and-cutting probe has been adapted from eye surgery for use as an alternative to open laminectomy. If the discectomy is ineffective, the patient can still undergo laminectomy. The technique requires a local anesthetic. Patients help surgeons **guide** the probe by telling them if it touches a nerve. The probe is guided toward the **spine** with the aid of fluoroscopy. (CT is used beforehand to map out a course.) The probe does not violate the **spinal** canal, eliminating the risk of epidural fibrosis. The procedure has not caused any complications in the 120 patients tested so far at 14 centers.

19/7/9 (Item 9 from file: 160)

DIALOG(R) File 160:Gale Group PROMT(R)  
(c) 1999 The Gale Group. All rts. reserv.  
01416285

**Technology digest: Herniated disc surgical instrument undergoes tests.**

MODERN HEALTHCARE September 26, 1986 p. 102

Surgical Dynamics (Oakland, California) has developed an new instrument that will allow surgeons to remove a herniated **disc** in a person's **spine** through an incision that is small enough to be covered by an adhesive bandage. The instrument is currently being tested at 19 **spine** and neurosurgery centers across the US. Using the disposable probe, surgeons can cut and suction out pieces of the herniated **disc** through a 2 millimeters diameter **tube**. The procedure, called percutaneous lumbar discectomy, can be performed with the patient under a local anesthetic. In most cases, the patient can go home the same day and return to work within 2 week. Traditional treatment for a herniated **disc**, surgical removal of the **disc** through a 5-in incision in the back, requires general anesthesia and a 5-d hospital stay. The patient often cannot return to work for 6 week.

## SURGICAL COMPRESSION PLATE AND DRILL GUIDE

**Patent number:** CA1174928  
**Publication date:** 1984-09-25  
**Inventor:** KLAUE KAJ  
**Applicant:** SYNTHES AG  
**Classification:**  
- international: A61F1/00  
- european: A61B17/17P; A61B17/80A  
**Application number:** CA19810390481 19811119  
**Priority number(s):** CH19800008599 19801120

**Also published as:**

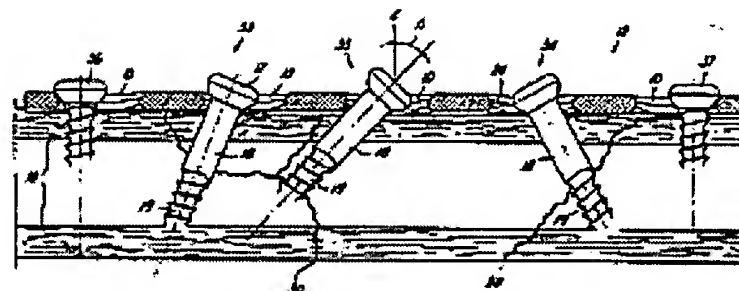
 EP0173267 (A1)  
 EP0053999 (A1)  
 US4493317 (A1)  
 GB2134796 (A)  
 GB2134795 (A)

more >>

[Report a data error here](#)

**Abstract of CA1174928**

**Surgical Compression Plate and Drill Guide** A surgical compression plate is provided which is designed to permit the insertion of bone screws at angles up to 45.degree.. A drill guide capable of tilting to various angles, for use in connection with the novel plate is also disclosed.





---

Data supplied from the **esp@cenet** database - Worldwide




## Surgical prosthetic implant

**Patent number:** EP0307241  
**Publication date:** 1989-03-15  
**Inventor:** BRANTIGAN JOHN W  
**Applicant:** BRANTIGAN JOHN W  
**Classification:**  
 - international: A61B17/58; A61F2/44  
 - european: A61B17/17S4; A61F2/44F2; A61F2/44F6; A61F2/46B7  
**Application number:** EP19880308375 19880909  
**Priority number(s):** US19870095461 19870911; US19880173928 19880328

### Also published as:

 EP0307241 (A3)  
 EP0307241 (B1)

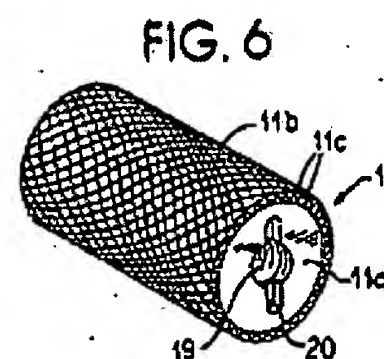
### Cited documents:

 DE3505567  
 EP0042271  
 US4501269

[Report a data error here](#)

### Abstract of EP0307241

Prosthetic plug implants (11,31-34,111) forming side-by-side transverse struts between adjacent vertebrae having roughened surfaces (11b,31b,32b,34d,122) receiving bone ingrowth to fuse the plugs on prepared surface sites (15,115) on opposed faces of adjacent vertebrae and have end faces (11a,31a,34a,111c) with tool receiving recesses (19,111d) securing the plug on a tool (24,120) for insertion on the prepared sites of the vertebrae and for removing the tool from the plug without disturbing its position on the sites. These sites can be prepared by feeding a drill (21) through a guide (22) fixed to posterior or anterior sides of adjacent vertebrae to form the prepared sites including cortex bone (18,118) in the opposed faces of the adjacent vertebrae and terminating the drilling in advance of the opposite sides of the vertebrae (16,116). Gauge blocks (119) may be used to stretch collapsed disc tissue (112a) between the vertebrae to reclaim normal disc space between the vertebrae. A preferred implant (111) is rectangular, has nubs, (122) on the sidewalls thereof, slots (124-125) receiving bone graft material (26) and is formed of radiolucent material.



Data supplied from the **esp@cenet** database - Worldwide

File 350:Derwent WPIX 1963-2005/UD,UM &UP=200573

(c) 2005 Thomson Derwent

File 347:JAPIO Nov 1976-2005/Jul(Updated 051102)

(c) 2005 JPO & JAPIO

Set	Items	Description
S1	2688776	TUBE OR TUBULAR OR TUBE LIKE OR SLEEVE OR CYLINDER OR CYLINDRICAL OR HOLLOW(1W) (SHAFT OR MEMBER OR DEVICE OR INSTRUMENT - OR PASSAGE??? OR GUARD) OR GUIDE
S2	674639	DISC? ? OR DISK? ? OR VERTEBRA? ?
S3	50379	IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIXATION() DEVICE? ?)
S4	6575719	DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S5	3530329	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES OR HOLE OR HOLES OR CAVITY OR CAVITIES
S6	21746	SPINE OR SPINAL
S7	624	S1 AND S2 AND S3
S8	189209	S4(2W) S5
S9	27	S7 AND S8
S10	278	S7 AND S6
S11	17	S9 AND S10 [16 too recent; 1 duplicate]
S12	10	S9 NOT S11
S13	1237115	AD=1989:1990
S14	3798799	AD=1991:1996
S15	1352178	AD=1994:1995
S16	1516847	AD=1996:1997
S17	2686605	AD=1998:2000
S18	2925452	AD=2001:2003
S19	589112	AD=2004:2005
S20	261	S10 NOT S9
S21	212	S20 NOT S13:S14
S22	215	S20 NOT S15:S16
S23	194	S20 NOT S17
S24	107	S20 NOT S18:S19
S25	197	S21 NOT S15:S16
S26	146	S25 NOT S17
S27	20	S26 NOT S18:S19
S28	7061	S1 AND S3
S29	435	S28 AND S6
S30	157	S29 NOT S9:S10
S31	135	S30 NOT S13:S14
S32	130	S31 NOT S15:S16
S33	101	S32 NOT S17
S34	26	S33 NOT S18:S19

12/34/9 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

007366454 \*\*Image available\*\*

WPI Acc No: 1988-000389/198801

Implant for securing two adjacent vertebrae - is in form of tapered tube of open cell metal with solid proximal end

Patent Assignee: GRUNDEI H (GRUN-I); S & G IMPLANTS GMBH (SGIM-N)

Inventor: THOMAS W

Number of Countries: 012 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3620549	A	19871223	DE 3620549	A	19860619	198801 B

WO 8707827	A	19871230	WO 87DE224	A	19870514	198802
EP 271501	A	19880622	EP 87902440	A	19870514	198825
DE 3620549	C	19890316				198911
EP 271501	B	19910227				199109
DE 3768223	G	19910404				199115

Priority Applications (No Type Date): DE 3620549 A 19860619

Cited Patents: DE 2910627; EP 42271; US 4501269

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

DE 3620549	A		3		
------------	---	--	---	--	--

WO 8707827	A	G			
------------	---	---	--	--	--

Designated States (National): US

Designated States (Regional): AT BE CH DE FR GB IT LU NL SE

EP 271501	A	G			
-----------	---	---	--	--	--

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

EP 271501	B				
-----------	---	--	--	--	--

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

Abstract (Basic): DE 3620549 A

The **implant** is in the form of a hollow, frusto-conical member with a cone angle of between 4 and 8 deg. and a wall thickness of 3 to 6 mm. Prior to insertion, retaining **cavities** are found in the **vertebrae** to be secured.

The **implant** (11) is made of metal with an open-cell structure (1) with the exception of at least the proximal end (4), which is made from a solid metal ring.

ADVANTAGE - Rigid, permanent **vertebrae** connection.

2,3/5

Abstract (Equivalent): DE 3620549 C

The **implant** secures adjacent **vertebrae** together, being of metal and open cellular construction. The proximal end (4,5) at least of the **implant** is formed by a solid metal **tube**, typically a ring welded to the cellular portion. The wall thickness of the **implant** can be 3 to 6 mm. ADVANTAGE - No damage to thin cell walls by splintering while hammering home.

(3pp)

Abstract (Equivalent): EP 271501 B

**Implant** for securing neighbouring **vertebrae** of the spinal column which are partially worn away on the opposing surfaces for **forming** a receiving **space** for the **implant** to be driven in using a tool, the **implant** being open-cell and metallic, characterised in that at least the proximal end (4), which **forms** the tool operative surface, of the otherwise open-cell, **cylindrical** or **tubular implant** (1) has a solid construction.

(4pp)

Derwent Class: P32

International Patent Class (Additional): A61F-002/44

27/26, TI/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

017196793

WPI Acc No: 2005-520420/200553

**Implantable device for repair of spinal annular defects, includes scaffold comprising biodurable, resiliently compressible, elastomeric reticulated composition to obliterate tissue defects**



27/26, TI/3 (Item 3 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
017079172  
WPI Acc No: 2005-403497/200541  
Connecting device for orthopedic surgery, e.g. to connect spinal rod and vertebral screw or hook, includes extension inserted through transverse opening of receiver member to connect grommet to the receiver member

27/26, TI/5 (Item 5 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
016908101  
WPI Acc No: 2005-232389/200524  
Interbody spacer for threaded center line cage for providing spacing to adjacent vertebrae, has cylindrical portion, defined by surface which has cylindrical shape, that is connected to converged end of conical portion

27/26, TI/7 (Item 7 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
016435181  
WPI Acc No: 2004-593098/200457  
Surgical instrumentation system for treating disc space to be fused with spinal implants, has end plate preparation instrument that provides end plates with shape corresponding to preselected shape of opposing surface of implants

27/26, TI/8 (Item 8 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
014910077  
WPI Acc No: 2002-730783/200279  
Adjustable intervertebral implant has groove provided in gaps between legs which dilator spreads so as to arrest dilator in predetermined location

27/26, TI/9 (Item 9 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
014512937  
WPI Acc No: 2002-333640/200237  
Implant material for shin- vertebral fusion, comprises numerous small holes formed in biodegradable-absorbable polymer containing cylinder, and non-porous bands provided along periphery of cylinder

27/26, TI/11 (Item 11 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
013640997  
WPI Acc No: 2001-125205/200114  
Implant for insertion between two vertebrae has support elements and a longitudinal hollow space with an outer wall of a tubing of densely woven textile material

27/26, TI/12 (Item 12 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.

013609114

WPI Acc No: 2001-093322/200111

**Cylindrical metal implant for insertion between two vertebrae in the spinal column can be opened in various directions to stimulate cell growth and fusion**

27/26, TI/13 (Item 13 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

012042371

WPI Acc No: 1998-459281/199840

**Spinal osteosynthesis implant - has rod insert channel offset relative to axis of threaded section**

27/26, TI/15 (Item 15 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

008292816

WPI Acc No: 1990-179817/199024

**Surgical implant for correcting spinal column - incorporates screwed tube to force adjacent vertebrae apart**

27/26, TI/16 (Item 16 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

007595701

WPI Acc No: 1988-229633/198833

**Articulated shoulder joint prosthesis - has rod with ball end fitting into sleeve in humerus and engaging with socket in shoulder blade**

27/26, TI/17 (Item 17 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004285390

WPI Acc No: 1985-112268/198519

**Dynamic correction of spinal deformation - uses implanted elastic rod constantly pulling spine into shape and secured to vertebrae by retaining clamps**

27/26, TI/19 (Item 19 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

003277445

WPI Acc No: 1982-C5430E/198210

**Bar implant for surgical scoliosis treatment - has hook secured to bar by friction and engaging vertebrae**

27/34/14 (Item 14 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

008308760 \*\*Image available\*\*

WPI Acc No: 1990-195761/199026

**Instrumentation for spinal fusion - has implantable end and external shaft fixation using sleeve and screw technique**

Patent Assignee: BEURIER J (BEUR-I)

Inventor: BEURIER J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2638632	A	19900511	FR 8814592	A	19881108	199026 B

Priority Applications (No Type Date): FR 8814592 A 19881108

Abstract (Basic): FR 2638632 A

The **implant** proper (1) is fixed into **vertebrae** or sacrum while the open end (2) accommodates a **sleeve** (9) with a securing screw (10) which immobilises the connecting **shaft** (8). The **sleeve** is either a complete or a half **cylinder** and its diameter fits the one of the **shaft** over through which it fits.

The **sleeve** can receive more securing screws, allowing stronger **fixation** of the **shaft** and more **implant** parts could be used to cover various distances.

USE/ADVANTAGE - For orthopaedic surgery such as **spinal** fusion. Provides strong and reliable **fixation** without compromising the **implant**.

Dwg.5/5

Derwent Class: P32

International Patent Class (Additional): A61F-002/44

27/34/18 (Item 18 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

003654722

WPI Acc No: 1983-14704K/198306

**Surgically implanted spinal fixation rod - with tubular sleeves engaging selected vertebrae to straighten spine**

Patent Assignee: EDWARDS C C (EDWA-I)

Inventor: EDWARDS C C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4369769	A	19830125				198306 B

Priority Applications (No Type Date): US 80159396 A 19800613

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4369769	A		8		

Abstract (Basic): US 4369769 A

Surgically **implanted** support includes a rod which is anchored to parts of the **spine**. The rod carries **tubular spacers** of dia. about 4mm greater than that of the rod. During surgery the rod can be tensioned and the **sleeves** slid to contact selected parts of the **spine**.

Pref. the **sleeves** are supplied with a variety of dia. to provide different displacements to the **spine**. Pref. the **sleeves** are made from high density polyethylene, carbon or metal covered with carbon or plastic.

The **sleeves** are used in conjunction with a Harrington rod for either compression or distraction of the **spine** and allow individual **vertebrae** to be aligned. Provision of **sleeves** of varying diameters and lengths eliminates the use of Harrington rods of differing deg of curvature.

2

Derwent Class: A96; D22; P32

International Patent Class (Additional): A61F-005/01

27/34/20 (Item 20 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
002180686

WPI Acc No: 1979-L0637B/197948

**Spinal implant fitting between vertebrae - has actuator pulling or thrusting between anchoring components secured to vertebrae**

Patent Assignee: GEBR SULZER AG (SULZ )

Inventor: NEUGEBAUER H

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2821678	A	19791122				197948 B
DE 2821678	B	19800430				198019
CH 628803	A	19820331				198215
AT 7803575	A	19820615				198227

Priority Applications (No Type Date): CH 785178 A 19780512

Abstract (Basic): DE 2821678 A

The **spinal implant** fits between adjacent **vertebrae** in order to treat **spinal** curvature, particularly skoliosis and/or kyphosis. One or more supporting or anchoring components (4) are secured to a **vertebra** or a protrusion from the latter.

An actuator (5) in two or more parts is mounted between adjacent anchoring components, the parts being movable relative to each other and thus pulling the anchoring components together or thrusting them apart. **The actuator can be a plug, sliding axially in a sleeve** under the action of a tension or compression.

Derwent Class: P32

International Patent Class (Additional): A61F-001/00; A61F-005/00

34/26, TI/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
017230931

WPI Acc No: 2005-554556/200556

**Medical implant e.g. hook, closure for spinal implant system, has rim stop on break-off portion to prohibit engagement of removal head by driving tool that engages driving head, where removal head removes closure from implant**

34/26, TI/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
017142235

WPI Acc No: 2005-466580/200547

**Torque limiting driver for orthopedic implant component, has cam in handle assembly interior, made to cooperate with cam finger to provide first level of torque to component driver shaft when handle assembly is rotated in first direction**

34/26, TI/4 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
016921103

WPI Acc No: 2005-245413/200526

**Knee unicompartmental or total prosthesis installing device, has tibial telescopic plate for verification of tibial mechanical axis, and jig or**

**virtual condylar implant applied on posterior cut to allow distal cutting of condyle**

**34/26, TI/5 (Item 5 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.  
016857246

WPI Acc No: 2005-181528/200519

**Polaxial bone screw for implantation in bone, has retainer ring with capture structure to operably receive and capture shank capture end and spherical surface that operably seats in head cavity partial spherical shaped surface**

**34/26, TI/6 (Item 6 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.  
016723589

WPI Acc No: 2005-047864/200505

**Spacer tube for fusion spinal implant , includes end cap supporting structure which is provided on inside wall**

**34/26, TI/7 (Item 7 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.  
016572282

WPI Acc No: 2004-731018/200472

**Pedicle screw and laminar hook clamping device, has clip including hole and two side axles sliding in respective slots of cylindrical part and taking respective circular cavities as axes to crimp spinal cord by simple rotation**

**34/26, TI/8 (Item 8 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.  
016531611

WPI Acc No: 2004-690177/200467

**Implant for promoting axon regeneration, has bio-resorbable tube which is completely filled with nerve regeneration-promoting three-dimensional bio-resorbable matrix**

**34/26, TI/10 (Item 10 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.  
014582222

WPI Acc No: 2002-402926/200243

**Closure for open ended medical implant e.g. bone screw, used in spinal surgery, has truncated cylindrical plug having opposing sectors whose radial outer surface define discontinuous threads**

**34/26, TI/11 (Item 11 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.  
014100318

WPI Acc No: 2001-584532/200166

**Instrument for gripping and manipulating an implant used e.g. in spinal osteosynthesis has curved gripping projection which chamfered edges**

**34/26, TI/12 (Item 12 from file: 350)**

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
014005705

WPI Acc No: 2001-489919/200154

Pedicle screw for spinal implants takes round bar whose  
longitudinally rotating shoe notchably accepts notch-legged clip for bar.

34/26, TI/14 (Item 14 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
012720244

WPI Acc No: 1999-526356/199944

Variable angle connector for spinal implant system

34/26, TI/16 (Item 16 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
012217168

WPI Acc No: 1999-023274/199902

Surgical cutting instrument for severing rod-shaped surgically-implanted  
component in situ - has depth gauge secured to strap attached across set of  
surgical cutting jaws, gauge having U-shaped guide at one end which extends  
into cutting area defined by cutting blades of jaws, U-shaped guide  
encompassing rod in use

34/26, TI/17 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
009187708

WPI Acc No: 1992-315147/199238

Tool for implantable neural electrode - comprises single structure  
electrode with outer substrate of semi-rigid body-tissue compatible  
insulating material with central spine from which number of fingers  
extend orthogonally to contact nerve

34/26, TI/18 (Item 18 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
008985927

WPI Acc No: 1992-113196/199214

Expandable cross-section implantable neural electrode - with series of  
fingers which extend orthogonally from centre spine to encompass hollow  
cylinder

34/26, TI/19 (Item 19 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
007639041

WPI Acc No: 1988-272973/198839

Implant for operative correction of spinal deformity - comprises  
distraction and compression rod with end provided with circumferential  
saw notches conically broadening towards top

34/26, TI/20 (Item 20 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
007487374

WPI Acc No: 1988-121307/198818

**Catheter implant mouthpiece with replaceable silicone rubber cover -  
for ease and speed of use by patient to exclude contamination**

34/26, TI/21 (Item 21 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004842653

WPI Acc No: 1986-345994/198652

**X-ray readable implantable pressure sensor - provides viewable shifting  
of radiopaque device in response to pressure change**

34/26, TI/22 (Item 22 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004410925

WPI Acc No: 1985-237803/198539

**Spinal curvature correction implant - has sliding clamp on bar with  
plate spring combinations**

34/26, TI/23 (Item 23 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004150669

WPI Acc No: 1984-296208/198448

**Cutter for craniotomy flap removal - has core drill with diamond surface  
oscillated by eccentric drive**

34/26, TI/24 (Item 24 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

003679787

WPI Acc No: 1983-39758K/198317

**Surgical implants coated with a fibrogenic enzyme - pref. covalently  
bonded to a polyurethane surface on the implant**

34/26, TI/26 (Item 26 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

001539286

WPI Acc No: 1976-L2231X/197647

**Surgical implant correcting curvature of spine - having prongs with  
connecting bridge and cable holder as integral titanium part**

File 349:PCT FULLTEXT 1979-2005/UB=20051110,UT=20051103

(c) 2005 WIPO/Univentio

Set	Items	Description
S1	333796	TUBE OR TUBES OR TUBULAR OR TUBE LIKE OR SLEEVE OR SLEEVES - OR CYLINDER? ? OR CYLINDRICAL
S2	7593	HOLLOW(1W) (SHAFT? ? OR MEMBER? ? OR DEVICE? ? OR INSTRUMEN- T? ? OR PASSAGE??? OR GUARD? ?)
S3	209119	GUIDE OR GUIDES OR CONDUIT? ? OR DUCT? ?
S4	139096	DISC? ? OR DISK? ? OR VERTEBRA? ?
S5	32796	IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIX- ATION() DEVICE? ?)
S6	44	SPINAL() (SCREW? ? OR NUT? ? OR STAPLE OR STAPLES)
S7	831631	DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S8	387919	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES
S9	5688	S1:S3(5W) S4
S10	143	S5:S6(S) S9
S11	53424	AD=1989:1991
S12	260030	AD=1992:1999
S13	189163	AD=1997:1999
S14	295534	AD=2000:2002
S15	144688	AD=2004:2005
<b>S16</b>	<b>18</b>	<b>S10 NOT S11:S15 [not relevant]</b>
S17	41	AU='MICHELSON GARY K' OR AU='MICHELSON GARY KARLIN'
S18	18	S16 NOT S17
S19	141330	GUIDE OR GUIDES OR GUARD? ?
S20	35816	DRILL???
S21	33	S20() S19(S) 4(S) S5:S6
S22	434	S20() S19
S23	25	S22(S) S4(S) S5:S6
<b>S24</b>	<b>1</b>	<b>S23 NOT S11:S15 [too recent]</b>
S25	24	S23 NOT (S16 OR S24)
S26	117	S10 NOT (S16 OR S23)



File 350:Derwent WPIX 1963-2005/UD,UM &UP=200573

(c) 2005 Thomson Derwent

File 349:PCT FULLTEXT 1979-2005/UB=20051110,UT=20051103

(c) 2005 WIPO/Univentio

File 348:EUROPEAN PATENTS 1978-2005/Nov W01

(c) 2005 European Patent Office

Set	Items	Description
S1	228	AU='MICHELSON G' OR AU='MICHELSON G K' OR AU='MICHELSON G K V' OR AU='MICHELSON GARY K' OR AU='MICHELSON GARY KARLIN'
S2	78763	SPINE OR SPINAL OR VERTEBRA?
S3	185	S1 AND S2
S4	137193	THROUGH(2W) (GUARD OR TUBE OR TUBULAR OR TUBELIKE OR PIPE OR PIPET OR TUBELIKE)
S5	37	S3 AND S4
S6	1937377	METHOD? ?/TI
S7	11	S5 AND S6
S8	11	IDPAT (sorted in duplicate/non-duplicate order)
S9	26	S5 NOT S7

8/3,AB,IC/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

013843231

WPI Acc No: 2001-327444/200134

XRPX Acc No: N01-235522

**Adjacent vertebrae preparing method for spinal disc surgery, involves inserting implant, whose height is greater than normal height of disc space, through hollow guard and into opening**

Patent Assignee: SOFAMOR DANEK HOLDINGS INC (SOFA-N)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6224595	B1	20010501	US 9862749	A	19980420	200134 B

Priority Applications (No Type Date): US 9862749 A 19980420

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6224595	B1	18	A61B-017/56		

Abstract (Basic): US 6224595 B1

Abstract (Basic):

NOVELTY - A bone from an adjacent **vertebrae** (V) is removed **through** a hollow **guard** to form an opening across a disc space and into a portion of each **vertebrae** . A cylindrical implant (50), whose height is greater than the normal height of the disc space, is inserted **through** the hollow **guard** and into the opening.

USE - For placing artificial fusion implant into intervertebral space left after removal of damaged **spinal** disc.

ADVANTAGE - Increases speed and improves safety of one-stage discectomy, fusion and interbody internal **spinal** fixation.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of driver and implant between **vertebrae** .

Cylindrical implant (50)

**Vertebrae** (V)

pp; 18 DwgNo 4D/5

International Patent Class (Main): A61B-017/56

8/3,AB,IC/2 (Item 2 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
010590012  
WPI Acc No: 1996-086965/199609  
Related WPI Acc No: 1990-022365; 1995-036040; 1995-351181; 1996-414238;  
1996-425184; 1996-433395  
XRPX Acc No: N96-072997  
Method for inserting spinal implant between two adjacent vertebra -  
involves inserting distractor in disc space by using drill which can be  
passed through hollow sleeve and inserting vertebra through tubular  
member  
Patent Assignee: MICHELSON G K (MICH-I)  
Inventor: MICHELSON G K  
Number of Countries: 001 Number of Patents: 001  
Patent Family:  

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5484437	A	19960116	US 88205935	A	19880613	199609 B
			US 91698674	A	19910510	
			US 9374781	A	19930610	

  
Priority Applications (No Type Date): US 91698674 A 19910510; US 88205935 A  
19880613; US 9374781 A 19930610  
Patent Details:  

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5484437	A	41	A61B-017/56		CIP of application US 88205935 Div ex application US 91698674 CIP of patent US 5015247

Abstract (Basic): US 5484437 A

The method comprises inserting a spinal distractor in the disc space on one or both sides of the spinal column to provide for proper spacing of the disc space between the vertebra. Then inserting over the spinal distractor a hollow tubular member having engagement means for engaging two adjacent vertebrae into the vertebrae.

The removing the spinal distractor from the hollow tubular member, and passing a drill through the tubular member to drill a hole in the disc and a portion of the two adjacent vertebrae, removing the drill, then inserting an implant in the vertebrae through the tubular member, and finally removing the tubular member.

ADVANTAGE - Other forms of implants may be used with the present method. For example, dowels, made from bone or artificial materials, knurled or irregularly shaped cylinders or spheres, or any other shaped implants that can be introduced through the outer sleeve may be used. Being able to perform the procedure through the outer sleeve permits the procedure to be performed safely and quickly, and more accurately.

Dwg.11A/18

International Patent Class (Main): A61B-017/56  
International Patent Class (Additional): A61B-017/00

8/3,AB,IC/3 (Item 3 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2005 European Patent Office. All rts. reserv.  
01634636  
Apparatus and method of inserting spinal implants  
Gerat zum Einsetzen von Ruckenwirbelimplantaten  
Appareil et procede d'insertion d'implants spinaux  
PATENT ASSIGNEE:

Gary Karlin Michelson, (4293910), 438 Sherman Canal, Venice, California  
90291, (US), (Applicant designated States: all)

INVENTOR:

**Michelson, Gary Karlin** , 13140 Boca De Canon Lane, Los Angeles, CA 90049  
, (US

LEGAL REPRESENTATIVE:

Viering, Jentschura & Partner (100648), Patent- und Rechtsanwälte,  
Steinsdorfstr. 6, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1346695 A1 030924 (Basic)

APPLICATION (CC, No, Date): EP 2003014398 960226;

PRIORITY (CC, No, Date): US 396414 950227

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;  
NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 1129668 (EP 2001114044)

EP 812167 (EP 2096907088)

INTERNATIONAL PATENT CLASS: A61B-017/17; A61F-002/46

ABSTRACT EP 1346695 A1

A guarded sleeve system for use in human **spinal** surgery across the  
height of a disc space between two adjacent **vertebral** bodies,  
comprising: an outer sleeve having an opening for providing protected  
access to the disc space and at least portions of the adjacent **vertebral**  
bodies; and

at least one extended portion extending from the outer sleeve for  
insertion into the disc space between the adjacent **vertebral** bodies,  
said at least one extended portion having a portion for bearing against  
each of the adjacent endplates of the adjacent **vertebral** bodies, said  
portion of said at least one extended portion having upper and lower  
surfaces adapted to contact the respective endplates of the adjacent  
**vertebral** bodies for properly aligning and distancing apart the adjacent  
**vertebral** bodies.

ABSTRACT WORD COUNT: 127

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200339	1426
SPEC A	(English)	200339	23327
Total word count - document A			24753
Total word count - document B			0
Total word count - documents A + B			24753

8/3,AB,IC/4 (Item 4 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2005 WIPO/Univentio. All rts. reserv.

00936197

**DYNAMIC LORDOTIC GUARD WITH MOVABLE EXTENSIONS FOR CREATING AN IMPLANTATION  
SPACE POSTERIORLY IN THE LUMBAR SPINE AND METHOD FOR USE THEREOF  
PROTECTION LORDOTIQUE DYNAMIQUE A RALLONGES MOBILES PERMETTANT DE CREER UN  
ESPACE D'IMPLANTATION VERS L'ARRIERE DE LA COLONNE LOMBAIRE ET SON  
PROCEDE D'UTILISATION**

Patent Applicant/Inventor:

**MICHELSON Gary K** , 438 Sherman Canal, Venice, CA 92091, US, US  
(Residence), US (Nationality

Legal Representative:

FLESHNER Mark L (et al) (agent), Fleshner & Kim, LLP, P.O. Box 221200,  
Chantilly, VA 20152-1200, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200269891 A2-A3 20020912 (WO 0269891)

Application: WO 2002US6021 20020301 (PCT/WO US02006021)

Priority Application: US 2001272381 20010301; US 2001272382 20010301

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI  
SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-017/56

Publication Language: English

Filing Language: English

Fulltext Word Count: 13526

English Abstract

A lordotic guard (100) and method for guiding a bone removal device to  
form an implantation space in the human spine and, if desired, for  
inserting a spinal implant into the implantation space.

8/3,AB,IC/5 (Item 5 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2005 WIPO/Univentio. All rts. reserv.

00928595

**INSTRUMENTATION AND METHOD FOR INSERTING AND DEPLOYING AN EXPANDABLE  
INTERBODY SPINAL FUSION IMPLANT**

**INSTRUMENTS ET TECHNIQUE PERMETTANT D'INTRODUIRE ET DE DEPLOYER UN IMPLANT  
DE FUSION INTERVERTEBRAL DEPLOYABLE**

Patent Applicant/Inventor:

MICHELSON Gary K , 438 Sherman Canal, Venice, CA 90291, US, US

(Residence), US (Nationality

Legal Representative:

FLESHNER Mark L (et al) (agent), Fleshner & Kim, LLP, P.O. Box 221200,  
Chantilly, VA 20153-1200, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200262272 A2-A3 20020815 (WO 0262272)

Application: WO 2002US2810 20020204 (PCT/WO US0202810)

Priority Application: US 2001266426 20010204; US 2001277890 20010321

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI  
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61F-002/32

Publication Language: English  
Filing Language: English  
Fulltext Word Count: 20089  
English Abstract

This invention is an implant holder (500) for inserting a **spinal** implant into a disc space. The implant holder (500) has a shaft (502) and an outer sleeve (504). Shaft (502) has a distal end (506), a proximal end (508), a reduced portion (510) extending towards distal end (506), an intermediate reduced portion (511), and an enlarged portion (512) between intermediate reduced portion (511) and proximal end (508). Shaft (502) is preferably hollow and is adapted to permit the passage of other instruments therethrough. Outer sleeve (504) has a distal end (522) and proximal end (524). Distal end (522) has upper and lower extensions (526, 528), and side extensions (530) adapted to cooperatively engage trailing end (104) of implant (100). Side extensions (530) each have a flange (532) to cooperatively engage slot (126) of implant (100) and a stop (534) for limiting further advancement of implant holder (500) into trailing end (104) of implant (100). A method for inserting a **spinal** implant into an implantation space using the implant holder (500) is disclosed.

8/3,AB,IC/6 (Item 6 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2005 WIPO/Univentio. All rts. reserv.  
00729911  
INSTRUMENT AND METHOD FOR CREATING AN INTERVERTEBRAL SPACE FOR RECEIVING  
AN IMPLANT  
INSTRUMENT ET PROCEDE DE CREATION D'UN ESPACE INTERVERTEBRAL DESTINE A  
RECEVOIR UN IMPLANT  
Patent Applicant/Inventor:  
MICHELSON Gary K , 438 Sherman Canal, Venice, CA 90291, US, US  
(Residence), US (Nationality)  
Legal Representative:  
WESOLOWSKI Carl R (agent), Fleshner & Kim, LLP, P.O. Box 221200,  
Chantilly, VA 20153-1200, US,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 200042898 A2-A3 20000727 (WO 0042898)  
Application: WO 2000US1821 20000125 (PCT/WO US0001821)  
Priority Application: US 99117039 19990125  
Designated States:  
(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)  
AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE  
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK  
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN  
YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM  
Main International Patent Class: A61B-017/58  
Publication Language: English  
Filing Language: English  
Fulltext Word Count: 16004  
English Abstract

A surgical instrument set for use in **spinal** surgery for forming a

substantially quadrilateral space in the **spine** for implanting a **spinal** implant at least in part into, at least in part across a disc space between adjacent **vertebral** bodies, and methods of use, are disclosed. The instrument set includes an extended guard (170) for providing protected access to the disc space, and the adjacent surfaces of the adjacent **vertebral** bodies, a guide (190) insertable into the guard (170), and a bone removal device (210) insertable into the guide (190).

8/3,AB,IC/7 (Item 7 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2005 WIPO/Univentio. All rts. reserv.

00562334

**SELF-BROACHING, ROTATABLE, PUSH-IN INTERBODY FUSION IMPLANT AND METHOD FOR DEPLOYMENT THEREOF**

**IMPLANT D'ARTHRODESE ROTATIF A EMBOITEMENT ET BROCHAGE AUTOMATIQUE, ET PROCEDE DE DEPLOIEMENT DE L'IMPLANT**

Patent Applicant/Assignee:

MICHELSON Gary K,

Inventor(s):

**MICHELSON Gary K**

Patent and Priority Information (Country, Number, Date):

Patent: WO 200025707 A1 20000511 (WO 0025707)

Application: WO 99US25292 19991029 (PCT/WO US9925292)

Priority Application: US 98106216 19981030

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE  
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK  
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN  
YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT  
BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA  
GN GW ML MR NE SN TD TG

Main International Patent Class: A61F-002/44

Publication Language: English

Fulltext Word Count: 14840

English Abstract

An interbody **spinal** fusion implant (20) for insertion across a disc space between adjacent **vertebral** bodies of a human **spine** has a body (22) two top side and two bottom side junctions, with at least a pair of diagonally opposed junctions having a distance therebetween that does not significantly exceed the implant body height. The implant (20) also includes one or more bone penetrating protrusions (36) extending outwardly from at least the upper and lower walls of the implant. The implant (20) is inserted on its side (28, 28') between adjacent **vertebral** bodies and then rotated 90 degrees into place. The protrusions (36) penetrate the endplates upon rotation, thereby securing the implant (36) within the **spine**. The implant (20) has at least one passage (38, 38') therethrough from the upper wall (30) to the lower wall (30') to promote fusion through the implant (20). Because of the specialized opposed junctions overdistraction between the adjacent **vertebral** bodies is avoided when the implant (20) is rotated from an initial insertion position to a final deployed position.

8/3,AB,IC/8 (Item 8 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2005 WIPO/Univentio. All rts. reserv.

00413741

**MILLING INSTRUMENTATION AND METHOD FOR PREPARING A SPACE BETWEEN ADJACENT VERTEBRAL BODIES**

**INSTRUMENTS DE MEULAGE ET PROCEDE DE PREPARATION D'UN ESPACE INTERVERTEBRAL**

Patent Applicant/Assignee:

MICHELSON Gary K,

Inventor(s):

**MICHELSON Gary K**

Patent and Priority Information (Country, Number, Date):

Patent: WO 9804202 A1 19980205

Application: WO 97US12956 19970731 (PCT/WO US9712956)

Priority Application: US 96688758 19960731

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU  
IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL  
PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH KE LS MW SD  
SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT  
LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: A61B-017/56

Publication Language: English

Fulltext Word Count: 18783

English Abstract

An apparatus and method for placing adjacent **vertebrae** at a fixed distance and angular relationship relative to each other, fixing the **vertebrae** in the position by use of a milling block (100) engaging each of the adjacent **vertebrae**, and then using a milling instrument (200), the depth, length and excursion of which from side to side are controlled by the apparatus to machine out a defined thickness of bone and a space of defined length, height, width and shape in preparation for receiving an inter-body **spinal** implant of graft or known size and configuration, are disclosed.

**8/3,AB,IC/9 (Item 9 from file: 349)**

DIALOG(R)File 349:PCT FULLTEXT

(c) 2005 WIPO/Univentio. All rts. reserv.

00344832

**APPARTUS AND METHOD OF INSERTING SPINAL IMPLANTS**

**APPAREIL ET PROCEDE POUR PLACER DES IMPLANTS SPINAUX**

Patent Applicant/Assignee:

MICHELSON Gary Karlin,

Inventor(s):

**MICHELSON Gary Karlin**

Patent and Priority Information (Country, Number, Date):

Patent: WO 9627345 A2 19960912

Application: WO 96US2377 19960226 (PCT/WO US9602377)

Priority Application: US 95396414 19950227

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE  
KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE  
SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD SZ UG AZ BY KG KZ MD RU TJ

TM AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA  
GN ML MR NE SN TD TG

Main International Patent Class: A61F-000/00

Publication Language: English

Fulltext Word Count: 27100

English Abstract

Apparatus and a method of inserting **spinal** implants is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** implant which is then inserted through the sleeve. Apparatus and a method of inserting **spinal** implants is disclosed in which an intervertebral space is first distracted to restore the normal angular relationship of the **vertebrae** adjacent to that disc space. An extended outer sleeve having extended portions capable of maintaining the **vertebrae** distracted in their normal angular relationship is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** implant which is then inserted through the sleeve.

8/3,AB,IC/10 (Item 10 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2005 WIPO/Univentio. All rts. reserv.

00344808

IMPROVED METHODS AND INSTRUMENTATION FOR THE SURGICAL CORRECTION OF HUMAN  
THORACIC AND LUMBAR SPINAL DISEASE FROM THE LATERAL ASPECT OF THE  
SPINE

PROCEDES AMELIORES POUR EFFECTUER DES CORRECTIONS CHIRURGICALES SUR LA  
COLONNE VERTEBRALE DE L'HOMME AU NIVEAU THORACIQUE ET LOMBAIRE, EN  
ABORDANT LA COLONNE VERTEBRALE LATERALEMENT ET INSTRUMENTS SERVANT A  
CES CORRECTIONS

Patent Applicant/Assignee:

MICHELSON Gary Karlin,

Inventor(s):

MICHELSON Gary Karlin

Patent and Priority Information (Country, Number, Date):

Patent: WO 9627321 A2 19960912

Application: WO 96US2378 19960226 (PCT/WO US9602378)

Priority Application: US 95394836 19950227

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE  
KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE  
SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD SZ UG AZ BY KG KZ MD RU TJ  
TM AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA  
GN ML MR NE SN TD TG

Main International Patent Class: A61B-017/56

Publication Language: English

Fulltext Word Count: 17625

English Abstract

An improved method and instrumentation for performing **spinal** surgery, including discectomy, interbody fusion and rigid internal fixation of the **spine**, from the lateral aspect of the **spine** is disclosed. The surgical procedure can be performed through a very small incision. The



instrumentation of the present invention, all of which is inserted from a lateral position into the **spine** in the preferred embodiment, comprises a guide pin, a distractor, an extended outer sleeve, an inner sleeve, an adjustable drill and an implant driver. The distractor of the present invention is driven into the disc for spacing apart and realigning the adjacent **vertebrae**. It further functions as an alignment rod for inserting the extended outer sleeve which is a hollow tubular member capable of maintaining said spacing and alignment of two adjacent **vertebrae** and defines a protected space through which subsequent instruments which may include, but are not limited to, a drill and a diameter reducing inner sleeve may be passed, as well as a **spinal** implant. The remainder of the surgical procedure consisting of the removal of **spinal** material across the disc, fusion, and rigid internal stabilization via the implant may all be performed via the closed space within the extended outer sleeve.

8/3,AB,IC/11 (Item 11 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2005 WIPO/Univentio. All rts. reserv.  
00280646  
**APPARATUS AND METHOD OF INSERTING SPINAL IMPLANTS**  
**APPAREIL ET PROCEDE D'INSERTION D'IMPLANTS SPINAUX**  
Patent Applicant/Assignee:  
KARLIN TECHNOLOGY INC,  
Inventor(s):  
**MICHELSON Gary Karlin**  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9428824 A2 19941222  
Application: WO 94US6345 19940609 (PCT/WO US9406345)  
Priority Application: US 9374781 19930610  
Designated States:  
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)  
AU BB BG BR BY CA CN CZ FI HU JP KP KR KZ LK LV MG MN MW NO NZ PL RO RU  
SD SK UA UZ VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF  
CG CI CM GA GN ML MR NE SN TD TG  
Main International Patent Class: A61B-017/56  
International Patent Class: A61F-02:32; A61F-05:00; B67B-07:04  
Publication Language: English  
Fulltext Word Count: 20634  
English Abstract

Apparatus and a method of inserting **spinal** implants is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** implant which is then inserted through the sleeve.

9/TI/3 (Item 1 from file: 349)  
DIALOG(R)File 349:(c) 2005 WIPO/Univentio. All rts. reserv.  
**SPINAL FUSION IMPLANT HAVING DEPLOYABLE BONE ENGAGING PROJECTIONS**

9/TI/5 (Item 3 from file: 349)  
DIALOG(R)File 349:(c) 2005 WIPO/Univentio. All rts. reserv.  
**TRANSLATERAL SPINAL IMPLANT**

9/TI/6 (Item 4 from file: 349)  
DIALOG(R)File 349:(c) 2005 WIPO/Univentio. All rts. reserv.  
**INTERSPACE IRRIGATOR**

9/TI/7 (Item 5 from file: 349)  
DIALOG(R)File 349:(c) 2005 WIPO/Univentio. All rts. reserv.  
**THREADED SPINAL IMPLANT**

9/TI/8 (Item 1 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Self-broaching, rotatable, push-in interbody spinal implant**

9/TI/9 (Item 2 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Arcuate ratcheted spinal fusion implant**

9/TI/11 (Item 4 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Translateral spinal distractor**

9/TI/14 (Item 7 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Cap for artificial spinal fusion implant**

9/TI/15 (Item 8 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Apparatus for compressively loading a spinal implant**

9/TI/16 (Item 9 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Apparatus for use in spinal surgery**

9/TI/17 (Item 10 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**A spinal distractor**

9/TI/19 (Item 12 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**SELF-BROACHING, ROTATABLE, PUSH-IN INTERBODY FUSION IMPLANT**

9/TI/20 (Item 13 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**TRANSLATERAL SPINAL IMPLANT**

9/TI/21 (Item 14 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**INSTRUMENTATION FOR THE SURGICAL CORRECTION OF HUMAN THORACIC AND LUMBAR  
SPINAL DISEASE FROM THE LATERAL ASPECT OF THE SPINE**

9/TI/23 (Item 16 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Interbody spinal fusion implants**

9/TI/24 (Item 17 from file: 348)  
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.  
**Apparatus for use in spinal surgery**

9/TI/26 (Item 19 from file: 348)  
DIALOG(R) File 348:(c) 2005 European Patent Office. All rts. reserv.  
**THREADED SPINAL IMPLANT**

9/3,AB,IC/1 (Item 1 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.  
015922650  
WPI Acc No: 2004-080490/200408  
XRAM Acc No: C04-033140  
XRPX Acc No: N04-064266

**Guard for use in human spinal surgery across disc space between adjacent vertebral bodies, comprises body having, and disc space(s) penetrating extension**

Patent Assignee: MICHELSON G K (MICH-I)  
Inventor: MICHELSON G K  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030199874	A1	20031023	US 2002125847	A	20020419	200408 B

Priority Applications (No Type Date): US 2002125847 A 20020419

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030199874	A1		38	A61F-002/30	

Abstract (Basic): US 20030199874 A1  
Abstract (Basic):

NOVELTY - A guard for use in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies, comprises a body having a leading end and an opposite trailing end, and a first and a second portion in pivotal relationship to one another; and disc space(s) penetrating extension.

DETAILED DESCRIPTION - A guard for use in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies, comprises a body having a leading end and an opposite trailing end, and a first portion (104) and a second portion (106) in pivotal relationship to one another near the leading end between an open position and a closed position; and disc space(s) penetrating extension (110, 112) extending from the leading end of the body adapted for insertion at least in part into the disc space. The first and second portions define an opening that provides protected access to the disc space and the adjacent **vertebral** bodies. They have opposed interior portions adapted to guide through it a bone removal device sized to form an implantation space across the disc space and at least in part into the adjacent **vertebral** bodies. The extension has a first portion extending from the first portion of the body, having a contact surface adapted to bear against one of the adjacent endplates of the adjacent **vertebral** bodies. The extension has a second portion extending from the second portion of the body, having a contact surface adapted to bear against the other of the adjacent endplates of the adjacent **vertebral** bodies. The contact surfaces of the first and second portions are in pivotal relationship to one another from an insertion position to a deployed position to move the adjacent **vertebral** bodies apart upon movement of the first and second portions of the body from the open position to the closed position. INDEPENDENT CLAIMS are also included for:

(a) a guard as above in combination with a boric removal device for forming **through** the **guard** an implantation space across the disc

space;

(b) a guard as above in combination with an implant driver sized in part for passage through the opening for passing an implant **through** the **guard** and into the disc space;

(c) a guard as above in combination with a **spinal** implant adapted to be inserted in the implantation space formed **through** the **guard** ;

(d) a guard as above in combination with a chemical substance adapted to inhibit scar formation; and

(e) a guard as above in combination with an antimicrobial material.

USE - For use in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies (particularly posterior lumbar surgery).

ADVANTAGE - The inventive guard creates an interbody implantation space while providing for **spinal** lordosis. The guard is inserted and removed easily and is safely.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-sectional view of the impaction cap.

First portion (104)

Second portion (106)

Windows (108)

Disc spaces penetrating extension (110, 112)

Impaction cap (124)

Contact surface (126)

pp; 38 DwgNo 18/45

International Patent Class (Main): A61F-002/30

**9/3,AB,IC/2 (Item 2 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

014902516

WPI Acc No: 2002-723222/200278

Related WPI Acc No: 2002-608554

XRAM Acc No: C02-204711

**Guard useful in human spinal surgery across a disc space between two adjacent vertebral bodies comprises a body having a leading end and an opposite trailing end and a disc space penetrating extension extending from the leading end**

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: **MICHELSON G K**

Number of Countries: 101 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200269891	A2	20020912	WO 2002US6021	A	20020301	200278 B
US 20020123753	A1	20020905	US 2001272381	P	20010301	200278
			US 200285731	A	20020301	
US 20020128659	A1	20020912	US 2001272382	P	20010301	200278
			US 200285406	A	20020301	
US 20040082958	A1	20040429	US 2001272382	P	20010301	200429
			US 200285406	A	20020301	
			US 2003675820	A	20030930	
AU 2002247230	A1	20020919	AU 2002247230	A	20020301	200433
EP 1418851	A2	20040519	EP 2002715009	A	20020301	200433
			WO 2002US6021	A	20020301	
US 20040181233	A1	20040916	US 2001272382	P	20010301	200461
			US 200285406	A	20020301	
			US 2004809149	A	20040325	

JP 2004535215 W 20041125 JP 2002569070 A 20020301 200477  
WO 2002US6021 A 20020301  
US 20050043741 A1 20050224 US 2001272382 P 20010301 200515  
US 200285406 A 20020301  
US 2004938381 A 20040911  
US 6896680 B2 20050524 US 2001272382 P 20010301 200535  
US 200285406 A 20020301  
US 20050216085 A1 20050929 US 2001266426 P 20010204 200564  
US 2001272381 P 20010301  
US 2001277890 P 20010321  
US 200261236 A 20020204  
US 200285731 A 20020301  
US 2005132140 A 20050518

Priority Applications (No Type Date): US 200285731 A 20020301; US  
2001272381 P 20010301; US 2001272382 P 20010301; US 200285406 A 20020301;  
US 2003675820 A 20030930; US 2004809149 A 20040325; US 2004938381 A  
20040911; US 2001266426 P 20010204; US 2001277890 P 20010321; US  
200261236 A 20020204; US 2005132140 A 20050518

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200269891 A2 E 69 A61K-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU  
ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

US 20020123753 A1 A61B-017/58 Provisional application US 2001272381  
US 20020128659 A1 A61B-017/58 Provisional application US 2001272382  
US 20040082958 A1 A61B-017/58 Provisional application US 2001272382  
Cont of application US 200285406

AU 2002247230 A1 A61K-000/00 Based on patent WO 200269891

EP 1418851 A2 E A61B-017/56 Based on patent WO 200269891

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

US 20040181233 A1 A61B-017/90 Provisional application US 2001272382  
Div ex application US 200285406

JP 2004535215 W 99 A61B-017/58 Based on patent WO 200269891

US 20050043741 A1 A61B-017/58 Provisional application US 2001272382  
Cont of application US 200285406

US 6896680 B2 A61B-017/56 Provisional application US 2001272382

US 20050216085 A1 A61F-002/44 Provisional application US 2001266426  
Provisional application US 2001272381  
Provisional application US 2001277890  
CIP of application US 200261236  
Div ex application US 200285731

Abstract (Basic): WO 200269891 A2

Abstract (Basic):

NOVELTY - A guard comprises a body having a leading end and an  
opposite trailing end. The body has two portions in pivotal  
relationship to one another between an open and a closed position. Each  
portion has opposed interior portions that have an opening for  
providing protected access to the disc space and the adjacent  
**vertebral** portions. The interior portions guide a bone removal device  
to form an implantation space across the disc space and at least in  
part into the **vertebral** bodies.

DETAILED DESCRIPTION - A guard comprises a body having a leading end and an opposite trailing end; and at least one disc penetration extension extending from the leading end of the body adapted for insertion at least in part into the disc space. The body has a first portion and a second portion proximate the leading end that are in pivotal relationship to one another between an open position and a closed position. The first and the second portions each have opposed interior portions that have an opening for providing protected access to the disc space and the adjacent **vertebral** bodies. The opposite interior portions are adapted to guide a bone removal device sized to form an implantation space across the disc space and at least in part into the adjacent **vertebral** bodies. The extension has a first portion extending from the first portion of the body that has a contact surface adapted to bear against one of the adjacent endplates of the adjacent **vertebral** bodies. The extension also has a second portion extending from the second portion of the body that has a contact surface adapted to bear against the other of the adjacent endplates of the adjacent **vertebral** bodies. The contact surfaces of the first and the second portions of the extension are in pivotal relationship to one another from an insertion position to a deployed position to move the adjacent **vertebral** bodies apart upon movement of the first and second portions of the body from the open position to the closed position or are rotatably articulating relative to one another between an insertion position and a deployed position to move the adjacent **vertebral** bodies apart.

USE - As an implantation in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies of human **spine** (claimed).

ADVANTAGE - During the posterior lumbar surgery the device creates an interbody implantation space while providing for **spinal** lordosis and while being easily and safely inserted and as easily and safely removed. The device quickly, safely, effectively and accurately spaces apart and positions a pair of adjacent **vertebral** bodies to receive an implant, which is anything to be designed to be left in the body for an extended length of time, working upon properly positioned **vertebral** body end plate regions adjacent a disc space so as to remove bone to produce a receiving surface corresponding to an implant having upper and lower surfaces to be implanted between the adjacent **vertebrae**. The device permits the insertion of disc penetrating extensions of a guard into the disc space posteriorly in a first position that facilitates insertion and removal of the disc penetrating extensions to be removed into a second position that orients the adjacent **vertebral** bodies. The device works with linear insertion along a single axis and without removing the device during the disc space preparation. The device is capable of working upon both of the **vertebral** body end plate regions adjacent a disc space to produce opposed receiving surfaces in the adjacent end plates corresponding at least in part in size, shape and contour to an implant to be implanted with the exception of the height of the implant, which is greater than the distance between the opposed receiving surfaces that may be distracted or otherwise moved apart by insertion of the implant, and in doing so define the shape to the implantation space. The device protects the neurological structures such as nerve roots and dural sac proximate the implantation site while providing protected access to form an implantation space.

DESCRIPTION OF DRAWING(S) - The figure is a rear perspective view of a lumbar segment of a **spine** with the dural sac retracted to the

left showing a partial discectomy and the guard with disc penetration extensions approaching the disc space between the adjacent **vertebral** bodies with the disc penetrating extensions in the first or insertion section.

first portion (104)  
windows (108)  
disc penetrating extensions (110, 112)  
impaction cap (124)  
pp; 69 DwgNo 38/45

International Patent Class (Main): A61B-017/56; A61B-017/58; A61B-017/90;  
A61F-002/44; A61K-000/00  
International Patent Class (Additional): A61B-017/16; A61L-027/00

9/3,AB,IC/4 (Item 2 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2005 WIPO/Univentio. All rts. reserv.  
00942641  
**RADIALLY EXPANDING INTERBODY SPINAL FUSION IMPLANTS AND INSTRUMENTATION  
FOR INSERTION THEREOF**  
**IMPLANTS DE FUSION INTERVERTEBRAUX A DILATATION RADIALE ET INSTRUMENTS POUR  
LEUR INTRODUCTION**  
Patent Applicant/Inventor:  
MICHELSON Gary K , 438 Sherman Canal, Venice, CA 90291, US, US  
(Residence), US (Nationality  
Legal Representative:  
FLESHNER Mark L (et al) (agent), FLESHNER & KIM, LLP, P.O. Box 221200,  
Chantilly, VA 20153-1200, US,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 200276335 A2-A3 20021003 (WO 0276335)  
Application: WO 2002US6661 20020326 (PCT/WO US0206661)  
Priority Application: US 2001279205 20010327; US 2001281714 20010404; US  
2002105839 20020325  
Designated States:  
(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)  
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI  
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM  
Main International Patent Class: A61F-002/44  
Publication Language: English  
Filing Language: English  
Fulltext Word Count: 18312  
English Abstract

Interbody **spinal** fusion implants (100) being at least in part radially expandable at one of the leading (104) or trailing (102) ends to expand both the height and at least a portion of the width of the implant (100). Instruments (300) and methods for inserting the implants (100) into an implantation space in the **spine** are disclosed.

9/3,AB,IC/10 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2005 European Patent Office. All rts. reserv.

01853037

**Instrumentation for inserting and deploying an expandable interbody spinal fusion implant**

**Instrumentarium zum Einführen und Positionieren eines expandierbaren Zwischenwirbel-Fusionsimplantates**

**Instrument permettant d'introduire et de deployer un implant de fusion intervertebral extensible**

PATENT ASSIGNEE:

MICHELSON, Gary Karlin, (1189020), 438 Sherman Canal, Venice, CA 90291,  
(US), (Applicant designated States: all)

INVENTOR:

Michelson, Gary Karlin , 13140 Boca De Canon Lane, Los Angeles, CA 90049  
, (US

LEGAL REPRESENTATIVE:

Viering, Jentschura & Partner (100646), Steinsdorfstrasse 6, 80538  
Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1504735 A2 050209 (Basic)  
EP 1504735 A3 050216

APPLICATION (CC, No, Date): EP 2004025696 020204;

PRIORITY (CC, No, Date): US 266426 P 010204; US 277890 P 010321

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

RELATED PARENT NUMBER(S) - PN (AN):

EP 1272130 (EP 2002703299)

INTERNATIONAL PATENT CLASS: A61F-002/46

ABSTRACT EP 1504735 A3

An apparatus for inserting an expandable spinal implant having an expander adapted to increase the height of the implant, said apparatus comprising:

an implant holder (1200) having a longitudinal axis, a passage (1212) along the longitudinal axis, and a distal end with an implant engagement area (1208) adapted to cooperatively engage the implant and remain engaged to the implant while the implant is expanded from an unexpanded position to an expanded position; and

an expander driver (1300) adapted to engage the expandable implant, said expander driver having a shaft (1302) adapted to pass through said passage of said implant holder, said shaft of said expander driver having a distal end adapted to engage the expander of the expandable implant.

ABSTRACT WORD COUNT: 122

NOTE:

Figure number on first page: 55

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200506	478
SPEC A	(English)	200506	19605
Total word count - document A			20083
Total word count - document B			0
Total word count - documents A + B			20083

9/3,AB,IC/18 (Item 11 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2005 European Patent Office. All rts. reserv.

01267549



**Guard having first and second passages for disc space surgery**  
**Schutzvorrichtung mit zwei Durchführungen zur Chirurgie des**  
**Zwischenwirbelraums**  
**Dispositif protecteur avec deux passages pour chirurgie de l'espace**  
**intervertebrale**

**PATENT ASSIGNEE:**

KARLIN TECHNOLOGY, INC., (1760130), 4929 Premiere Avenue, Lakewood,  
California 90712, (US), (Proprietor designated states: all)

**INVENTOR:**

**Michelson, Gary Karlin** , 438 Sherman Canal, Venice, California 90291,  
(US

**LEGAL REPRESENTATIVE:**

Viering, Hans-Martin, Dipl.-Ing. et al (12202), Patentanwälte Viering &  
Jentschura, Postfach 22 14 43, 80504 Munchen, (DE)

**PATENT (CC, No, Kind, Date):** EP 1092395 A2 010418 (Basic)  
EP 1092395 A3 010516  
EP 1092395 B1 040407

**APPLICATION (CC, No, Date):** EP 2000204830 940609;

**PRIORITY (CC, No, Date):** US 74781 930610

**DESIGNATED STATES:** AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;  
NL; PT; SE

**EXTENDED DESIGNATED STATES:** SI

**RELATED PARENT NUMBER(S) - PN (AN):**

EP 703757 (EP 94920704)

**INTERNATIONAL PATENT CLASS:** A61B-017/17

**ABSTRACT EP 1092395 A3**

A guard for use in performing surgery across a disc space between two adjacent **vertebral** bodies is described. The guard comprises an elongated body having a proximal end and an opposite distal end for placement against the adjacent **vertebral** bodies. The guard has a first passage through said elongated body for providing protected access to the disc space and the adjacent **vertebral** bodies for forming therein a first bore having a radius, and a second passage through said elongated body for providing protected access to the disc space and the adjacent **vertebral** bodies for forming therein a second bore having a radius. Each of the first and second passages have a central longitudinal axis, the longitudinal axes being spaced from each other greater than the sum of the radius of the first bore and the radius of the second bore.

**ABSTRACT WORD COUNT:** 141

**NOTE:** Figure number on first page: 7F

**LANGUAGE (Publication,Procedural,Application):** English; English; English

**FULLTEXT AVAILABILITY:**

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200116	390
CLAIMS B	(English)	200415	576
CLAIMS B	(German)	200415	530
CLAIMS B	(French)	200415	625
SPEC A	(English)	200116	16597
SPEC B	(English)	200415	14679
Total word count - document A			16989
Total word count - document B			16410
Total word count - documents A + B			33399

File 155:MEDLINE(R) 1951-2005/Nov 11  
(c) format only 2005 Dialog  
File 5:Biosis Previews(R) 1969-2005/Nov W1  
(c) 2005 BIOSIS  
File 73:EMBASE 1974-2005/Nov 15  
(c) 2005 Elsevier Science B.V.  
File 34:SciSearch(R) Cited Ref Sci 1990-2005/Nov W1  
(c) 2005 Inst for Sci Info  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info

Set	Items	Description
S1	268	AU='MICHELSON G' OR AU='MICHELSON G.'
S2	82	AU='MICHELSON G K' OR AU='MICHELSON GARY K' OR AU='MICHELSON GARY KARLIN'
S3	11525783	SPINE OR SPINAL OR VERTEBRA?
S4	2755662	IMPLANT? OR GRAFT? OR TRANSPLANT?
S5	525491	GUARD OR TUBE OR TUBULAR OR TUBELIKE OR PIPE OR PIPET
S6	122	S1:S2 AND S3
S7	59	S4 AND S6
S8	3	S5 AND S7
S9	3	RD (unique items)
S10	3	S6 AND S5
S11	0	S10 NOT S8
S12	56	S7 NOT S8
S13	36	RD (unique items)
S14	36	Sort S13/ALL/PY,A

9/7/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2005 BIOSIS. All rts. reserv.  
0014775997 BIOSIS NO.: 200400156754  
Spinal interspace shaper  
AUTHOR: Michelson Gary K (Reprint  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1279 (3): Feb. 17, 2004 2004  
MEDIUM: e-file  
ISSN: 0098-1133 (ISSN print)  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English  
ABSTRACT: A device and method for use in a vertebral spine to prepare a space between adjacent vertebral bodies to receive an implant. The device includes a shaft, and a mounting member at one end of the shaft. A working end is mounted on the mounting member and is coupled to a drive mechanism adjacent to the working end. The drive mechanism is operable to move the upper and lower cutters of the working end to create surfaces having predetermined contours in the end plate region of the adjacent vertebral bodies. A guard provides protected access to the disc space and the adjacent vertebral bodies for the working end of the bone removal device through a passageway.

9/7/2 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2005 BIOSIS. All rts. reserv.  
0013919390 BIOSIS NO.: 200200512901

**Method for inserting spinal implants and for securing a guard to the spine**

**AUTHOR: Michelson Gary Karlin**

**JOURNAL:** Official Gazette of the United States Patent and Trademark Office  
Patents 1261 (3): Aug. 20, 2002 2002

**MEDIUM:** e-file

**ISSN:** 0098-1133

**DOCUMENT TYPE:** Patent

**RECORD TYPE:** Abstract

**LANGUAGE:** English

**ABSTRACT:** Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve.

**9/7/3 (Item 3 from file: 5)**

**DIALOG(R)File** 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013313636 BIOSIS NO.: 200100485475

**Instrumentation and method for creating an intervertebral space for receiving an implant**

**AUTHOR: Michelson Gary K**

**JOURNAL:** Official Gazette of the United States Patent and Trademark Office  
Patents 1246 (1): May 1, 2001 2001

**MEDIUM:** e-file

**ISSN:** 0098-1133

**DOCUMENT TYPE:** Patent

**RECORD TYPE:** Abstract

**LANGUAGE:** English

**ABSTRACT:** A surgical instrument set for use in **spinal** surgery for forming a substantially quadrilateral space in the **spine** for **implanting a spinal implant** at least in part into and at least in part across a disc space between adjacent **vertebral** bodies and methods of use are disclosed. The instrument set includes an extended **guard** for providing protected access to the disc space and the adjacent surfaces of the adjacent **vertebral** bodies, a guide insertable into the **guard** , and a bone removal device insertable into said guide.

**14/7/2 (Item 2 from file: 5)**

**DIALOG(R)File** 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013443690 BIOSIS NO.: 200200037201

**Apparatus and method of inserting spinal implants**

**AUTHOR: Michelson G K**

**AUTHOR ADDRESS:** 438 Sherman Canal, Venice, Calif. 90291, USA\*\*USA

**JOURNAL:** Official Gazette of the United States Patent and Trademark Office  
Patents 1185 (2): p1055-1056 April 9, 1996 1996

**MEDIUM:** print

**ISSN:** 0098-1133

**DOCUMENT TYPE:** Patent

**RECORD TYPE:** Citation

**LANGUAGE:** English

1 14/7/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2005 BIOSIS. All rts. reserv.  
0013531035 BIOSIS NO.: 200200124546  
**Apparatus for inserting spinal implants**  
AUTHOR: **Michelson G K**  
AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA\*\*USA  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1213 (4): p3605 Aug. 25, 1998 1998  
MEDIUM: print  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Citation  
LANGUAGE: English

14/7/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2005 BIOSIS. All rts. reserv.  
0013526871 BIOSIS NO.: 200200120382  
**Methods and instrumentation for the surgical correction of human thoracic and lumbar spinal disease from the antero-lateral aspect of the spine**  
AUTHOR: **Michelson G K**  
AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA\*\*USA  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1211 (5): p4826 June 30, 1998 1998  
MEDIUM: print  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Citation  
LANGUAGE: English

14/7/5 (Item 5 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2005 BIOSIS. All rts. reserv.  
0013513966 BIOSIS NO.: 200200107477  
**Method for inserting spinal implants**  
AUTHOR: **Michelson G K**  
AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA\*\*USA  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1209 (3): p2203-2204 April 21, 1998 1998  
MEDIUM: print  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Citation  
LANGUAGE: English

14/7/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2005 BIOSIS. All rts. reserv.  
0013041811 BIOSIS NO.: 200100213650  
**Apparatus instrumentation, and method for spinal fixation**  
AUTHOR: **Michelson Gary Karlin**  
JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1238 (3): Sep. 19, 2000 2000

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A **spinal** fixation device for stabilizing one or more segments of the human **spine** and for preventing the dislodgement of intervertebral **spinal** fusion **implants**, which remains permanently fixated once applied. The **spinal** fixation device of the present invention comprises of a staple member made of material appropriate for human surgical **implantation** which is of sufficient length to span the disc space between two adjacent **vertebrae** and to engage, via essentially perpendicular extending projections, the **vertebrae** adjacent to that disc space. A portion of the staple of the **spinal** fixation device interdigitates with an already **implanted** intervertebral **spinal** fusion **implant** which itself spans the disc space to engage the adjacent **vertebrae**, and the **spinal** fixation device is bound to the **spinal** fusion **implant** by a locking means. The **spinal** fixation device of the present invention is of great utility in restraining the **vertebrae** adjacent to the **spinal** fusion **implant** from moving apart as the **spine** is extended and also serves as an anchor for a multi-segmental **spinal** alignment means for aligning more than one segment of the **spine**.

14/7/9 (Item 9 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0012973711 BIOSIS NO.: 200100145550

Method of inserting and preloading spinal implants

AUTHOR: Michelson Gary Karlin

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1235 (4): June 27, 2000 2000

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Apparatus and a method of inserting **spinal** **implants** is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** **implant** which is then inserted through the sleeve. Apparatus and a method of inserting **spinal** **implants** is disclosed in which an intervertebral space is first distracted to restore the normal angular relationship of the **vertebrae** adjacent to that disc space. An extended outer sleeve having extended portions capable of maintaining the **vertebrae** distracted in their normal angular relationship is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** **implant** which is then inserted through the sleeve.

14/7/11 (Item 11 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013274844 BIOSIS NO.: 200100446683

**Method for inserting frusto-conical interbody spinal fusion implants**

AUTHOR: **Michelson Gary Karlin**

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1245 (1): Apr. 3, 2001 2001

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The present invention is directed to a method of inserting a variety of interbody **spinal fusion implants** having at least a partially frusto-conical configuration and the instrumentation and methods by which the **implants** .

14/7/13 (Item 13 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013206181 BIOSIS NO.: 200100378020

**Anterior spinal instrumentation and method for implantation and revision**

AUTHOR: **Michelson Gary K** (Reprint); Boyd Lawrence M

AUTHOR ADDRESS: 438 Sherman Canal, Venice, CA, 90281, USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1243 (3): Feb. 20, 2001 2001

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A system and method for anterior fixation of the **spine** utilizes a cylindrical **implant** engaged in the a intradiscal space at the cephalad and caudal ends of the construct. The **implants** are cylindrical fusion devices (10) filled with bone material to promote bone ingrowth and fusion of the disc space. An attachment member (40) is connected to each of the fusion devices (10) and bone screws (30) having similar attachment members (33) are engaged in the **vertebral** bodies of the intermediate **vertebrae** . A **spinal** rod (50) is connected to each of the attachment members using an eyebolt assembly (53, 54, 55). In a further inventive method, a revision of the construct is achieved by removing the fusion devices. Each fusion device is engaged by an elongated guide member (62) over which a cylindrical trephine (70) is advanced. The trephine (70) has an inner diameter larger than the diameter of the fusion **implant** and includes cutting teeth (72) for extracting a core (84) of bone material around the fusion **implant** . The trephine (70) and guide member (62) are removed along with the bone core (84) containing the fusion **implant** (10). The trephine (70) is also used to extract a bone dowel from a solid bone mass to be inserted into the space left by the removed bone core (84).

14/7/18 (Item 18 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013951359 BIOSIS NO.: 200200544870

**Milling instrumentation and method for preparing a space between adjacent**

**vertebral bodies**

**AUTHOR: Michelson Gary K**

**JOURNAL:** Official Gazette of the United States Patent and Trademark Office  
Patents 1261 (4): Aug. 27, 2002 2002

**MEDIUM:** e-file

**ISSN:** 0098-1133

**DOCUMENT TYPE:** Patent

**RECORD TYPE:** Abstract

**LANGUAGE:** English

**ABSTRACT:** An apparatus and method for placing adjacent **vertebrae** at a fixed distance and angular relationship relative to each other, fixing said **vertebrae** in said position by use of a milling block engaging each of said adjacent **vertebrae** and then using a milling means, the depth, length and excursion of which from side to side are controlled by said apparatus to machine out a defined thickness of bone and a space of defined length, height, width and shape in preparation for receiving an interbody **spinal implant** or **graft** of known size and configuration are disclosed.

**14/7/25 (Item 25 from file: 5)**

**DIALOG(R)File** 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0014238143 BIOSIS NO.: 200300196862

**Device and method for preparing a space between adjacent vertebrae to receive an insert**

**AUTHOR: Michelson Gary K** (Reprint

**JOURNAL:** Official Gazette of the United States Patent and Trademark Office  
Patents 1268 (4): Mar. 25, 2003 2003

**MEDIUM:** e-file

**ISSN:** 0098-1133 \_(ISSN print)

**DOCUMENT TYPE:** Patent

**RECORD TYPE:** Abstract

**LANGUAGE:** English

**ABSTRACT:** A device and method for use in a human **spine** to prepare a space between adjacent **vertebral** bodies and into the **vertebral** end plates to receive an **implantable** insert. The device includes a handle, a shaft, and a mounting member at one end of the shaft. An abrading element is mounted on the mounting member and is coupled to a drive mechanism. The drive mechanism is operable to move the abrading element in at least one degree of freedom to create surfaces having predetermined contours in the end plates of the adjacent **vertebral** bodies.

**14/7/30 (Item 30 from file: 5)**

**DIALOG(R)File** 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0015001027 BIOSIS NO.: 200400371816

**Apparatus for use in inserting spinal implants**

**AUTHOR: Michelson Gary Karlin** (Reprint

**JOURNAL:** Official Gazette of the United States Patent and Trademark Office  
Patents 1285 (1): Aug. 3, 2004 2004

**MEDIUM:** e-file

**ISSN:** 0098-1133 \_(ISSN print)

**DOCUMENT TYPE:** Patent

**RECORD TYPE:** Abstract

**LANGUAGE:** English

ABSTRACT: Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve. Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted to restore the normal angular relationship of the **vertebrae** adjacent to that disc space. An extended outer sleeve having extended portions capable of maintaining the **vertebrae** distracted in their normal angular relationship is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve.